

A black hole algorithm for solving the set covering problem

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The set covering problem is a classical optimization benchmark with many industrial applications such as production planning, assembly line balancing, and crew scheduling among several others. In this work, we solve such a problem by employing a recent nature-inspired metaheuristic based on the black hole phenomena. The core of such a metaheuristic is enhanced with the incorporation of transfer functions and discretization methods to handle the binary nature of the problem. We illustrate encouraging experimental results, where the proposed approach is capable to reach various global optimums for a well-known instance set from the Beasley's OR-Library. © Springer International Publishing Switzerland 2016.

Black Hole algorithm

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